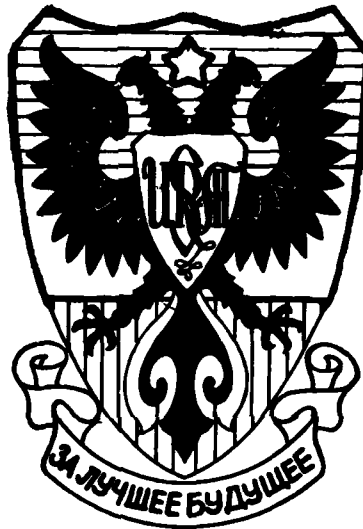


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NUCLEAR ATTACK:
HOW VIABLE AN OPTION?
-1979-

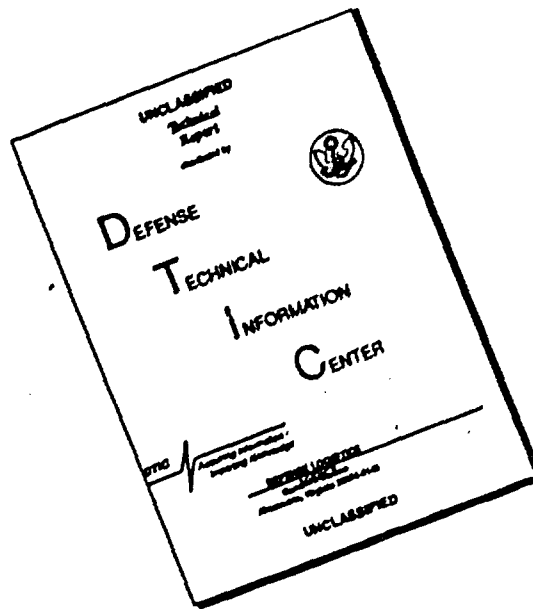
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F O R E W O R D

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JOHN G. CANYOCK
LTC, MI
Commanding

SUMMARY

NATO bases its theater doctrine on the assumptions that any Warsaw Pact attack will be preceded by considerable warning time and that initial hostilities will be in a conventional mode. In this paper the author assesses the viability of the opposing scenario: a Warsaw Pact short-warning attack with nuclear weapons employed from the start. The author concludes that Soviet open source documents indicate that NATO is preparing to fight the wrong first battle of the next war.

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War must not simply [be] the
defeat of the enemy, it must
be his total destruction.
This condition has become the
basis of Soviet military
strategy.

Lenin

INTRODUCTION

Across the inter-German border the North Atlantic Treaty Organization (NATO) faces the ever growing, ever improving Soviet dominated Warsaw Pact (WP). The mainstay of that force is the Group of Soviet Forces, Germany (GSFG), with the best equipment and troops - almost all ethnic Russian - that the Soviet Union can provide. The growth of the WP has been termed by many Western analysts as out of proportion for any prudent defense needs. On the other hand, there are those who see the steady buildup as a result of the Soviet penchant for "over security" or of bureaucratic and military-industrial complex momentum. Some analysts believe that the West can no longer rely on a qualitative superiority to make up for the disparity in numbers in favor of the WP. The Soviet Union has already qualitatively eclipsed the West in several vital military areas. The SALT I and interim agreements have not slowed the pace of the Soviet drive; in many areas the pace has quickened since the treaties were signed. In fact, many hold the Soviet Union is rapidly becoming the dominant military power in the world. Based on its lack of any other credible source of international power, prestige or influence, the Soviets can be expected to exercise their military power to gain political goals.

The Soviet Union could choose from several possible alternatives to utilize its military power. The most decisive choice would be to go to war against the West, or more specifically an attack by the WP against NATO. However unlikely one may choose to label that choice, the most optimistic statement that can be made today is that it does not now appear very likely. But modern history is full of surprises - small and strategic. It is this possible choice that is the "raison d'etre" for NATO.

A multitude of WP attack scenarios are analyzed by NATO for the formulation of its defensive doctrine. Some are done in such detail that they become computerized war games played by NATO planning staffs. Scenarios range in nature from those involving a protracted mobilization and buildup phase, thus providing NATO with considerable warning time, to those with a minimum of warning time available utilizing nuclear weapons from the start.

Many Western analysts have over the years placed most of their emphasis on the former scenario. The purpose of this paper is to examine the latter scenario from the most important perspective, not from a Western view, but from the Soviet perspective. Two questions answered from the Soviet perspective are therefore central to the examination: (1) How viable is the short-warning attack scenario? (2) Will nuclear weapons be employed from the start?

The paper is divided in two parts. Part I is a brief look at the current military situation in the European theater: the military balance; deployment of forces, likely invasion routes and an examination of the warning time variable and how it affects the military balance. Part II is concerned with the Soviet view of theater war: concepts of surprise, mobilization, preemption, the nuclear and non-nuclear offensive options, and others important to Soviet strategy and tactics.

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Part I
THE SITUATION

THE THEATER MILITARY BALANCE

Assessing the military balance between the WP and NATO forces literally keeps several thousand military and civilian specialists in full time employment and several internationally known institutions in business. There are as many ways to look at the balance as there are balancers. The so-called "bean counting" (a pure numbers comparison of weapons systems, manpower, etc.) is difficult enough by itself, but the conclusions drawn from the results still require a touch of wizardry to obtain the "so what?". The "so what?" depends a great deal on what is counted and is thus open to a great deal of manipulation.

A detailed review of the statistical analysis of the current balance is not necessary,¹ however, the following charts and maps depict some of the more important aspects of the current military situation in the northern and central sectors of NATO. Any war between the WP and NATO will be decided here.

The Ground Forces

The charts below depict the situation measured in divisional equivalents and total manpower available. The charts include American, West German, British, Belgian and Dutch divisions for NATO and those category one and two divisions in Soviet western military districts probably earmarked for northern and central front employment plus Soviet, East German, Czechoslovakian and Polish units.

Ground Forces²

Type of div.	NATO	WP	(of which Soviet)
Tank	10	32	22
Mechanized Inf.	13	33	20
Inf. and Abn.	4	5	3
Total	27	70	25

Manpower³

combat manpower in all types of formations (in thousands)	NATO	WP	(of which Soviet)
	626	943	638

Legend:

- Airfield
- Army Command Headquarters
- City

Scale: 50 Miles, 50 Kilometers

Locations of symbols are approximate

Map Labels:

- North Sea
- DENMARK
- Bremerhaven
- Garlstadt
- NETHERLANDS
- FEDERAL REPUBLIC OF GERMANY
- Bonn
- Spangdahlem AB
- Hahn AB
- Wiesbaden
- Frankfurt
- Rhein-Main AB
- Darmstadt
- Sembach AB
- Wurzburg
- Grafenwoehr
- BEI AB
- Bitburg AB
- Kreuznach
- Kaiserslautern
- Ramstein AB
- Zweibrücken AB
- Heidelberg
- Nurnberg
- Ansbach
- Schwaebisch-Gmuend
- Goeppingen
- Nellingen
- Moehringen
- GERMAN DEMOCRATIC REPUBLIC
- Berlin
- POLAND
- CZECHOSLOVAKIA
- AUSTRIA
- FRANCE
- SWITZERLAND
- LIECH.

Data compiled by Richard F. Grimmert and Robert G. Bell Congressional Research Service Library of Congress

Boundary Representation is Not necessarily Authoritative

(4)

The North German Plain approach favors the use of tanks, as the terrain is gently rolling and has an excellent highway system. The numerous existing bridges in the area, the enormous Soviet bridging capability, to include prepositional stock-piles near the inter-German border, and a high state of training in river crossing techniques greatly reduce the obstacle value of the numerous rivers south of Hannover. North of Hannover, due to the marshy terrain, traffic would be limited to existing roads. One of the major lines of U.S. communication from the port of Bremerhaven southward lies close to the inter-German border and would likely be out early in any attack.

The Fulda Gap approach lies astride the boundary between the U.S. and West German corps and leads to the important U.S. military complexes surrounding Frankfurt (see Map). The road net along this route is good, however rough ground and woods will tend to slow cross country movement. The Eighth Guards Army is well positioned to breach the Fulda Gap.

The Hof Corridor approach leads into Bavaria toward the Nurnberg and Stuttgart areas. The terrain is hilly the entire distance, but contains a good road network once the narrow mountain passes are breached. Based on the southern location of the headquarters and the two north-south autobahns leading to Hof, the First Guards Tank Army is well positioned to utilize this avenue of approach.

Although it is impossible to conclude intentions from peacetime garrison locations, it appears that Soviet tank divisions are concentrated along highway networks providing excellent high speed approaches into West Germany utilizing routes south of Hannover across the North German Plain. The Third Shock Army, the 20th Guards Army, and possibly the First Guards Tank Army are well positioned for initial thrusts across the plain. WP success in this area would put NATO in danger of being enveloped from the northern flank which would force the relocation of NATO forces west of the Rhine river on the first defensible terrain to the rear. At 150 miles wide, there is little maneuver space in West Germany. Destruction of Rhine river bridges would make the river practically unfordable and thus easily defended. However, many of the major industrial areas of West Germany would be in WP hands and any counterattack by NATO would be extremely difficult and costly.

Soviet motorized rifle divisions are concentrated in the south along the more difficult routes. It is interesting to note that the most heavily armed of all NATO units, US divisions, protect this area - the most easily defended. The recent relocation of a US brigade in the north is an attempt to rectify this disparity.

Air and Naval Forces

The following charts depict the current naval and air force situation in Northern and Central Europe. Again, detailed estimates and analysis of this portion of the military balance are readily available elsewhere.

Tactical Aircraft⁴

Tactical aircraft in operational service	NATO	WP	(of which Soviet)
light bombers	160	130	125
fighter/ground attack	1400	1350	925
interceptors	435	2025	900
reconnaissance	380	550	350

Naval Forces⁵

Category	NATO	WP
Sea-control forces		
strike groups	5	-
support groups	7	3
escort groups	30	13
asw/recon aircraft (shore based)	325	164
asw/recon aircraft (carrier based)	114	19
mine counter-measure groups	40	50
air defense aircraft (carrier based)	186	-
Sea-denial forces		
attack sub (nuclear)	77	64
attack sub (diesel)	134	125
strike aircraft (shore based)	77	264
strike aircraft (carrier based)	384	-

SSBN	37	52
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Note: non-Soviet contributions to WP naval forces are almost negligible.

In the past it was clear that WP air forces were oriented toward an air defense mission. The Soviets chose to deploy a large MRBM force for deep strike missions rather than manned aircraft.

Now, however, the latest versions of Flogger, Fitter and Fencer indicate an increased range, payload and electronic counter-measures (ECM) capability.⁶ Consequently, NATO's air defense problems are increasing as it adjusts to countering the new WP ground attack and interdiction capability. The US has deployed new F-15 and F-111 squadrons to Europe to counter this threat. As NATO deploys the new F-16 air superiority fighter the rate of increase of NATO's air defense problems will at least be slowed. Presently one may conclude that the battle for theater air superiority is likely to be a draw. Hopefully current Soviet inferiority in electronics and training will continue until the F-16 is deployed.⁷

The naval balance over the past several years presents a similar picture. Ten years ago NATO could undoubtedly accomplish all of its maritime missions simultaneously: protection of sea routes for US reinforcements, merchant shipping and deployment of amphibious forces; projection of air power ashore from carriers; and destruction of Soviet SSBNs. Under the dynamic leadership of Admiral Gorshkov the Soviet Navy has developed a formidable sea denial capability. This mission requires fewer ships than sea control and has been developed to the point where NATO cannot accomplish all maritime tasks; rather, it must concentrate its forces for accomplishing one mission at a time.⁸

At first glance one might be tempted to label as a weakness the location of a high percentage of the Soviet Navy, namely the SSBN fleet, in port at any one time. Any sudden movement from port by a large force would be a sure tip-off that an attack was imminent. There are several ways in which the intelligence value of such activity could be greatly reduced. Moderate increases in activity over a period of years or months or a series of training drills over a period of time would tend to denigrate the indicator value of sudden mass movements. Additionally, the fleet in port is at a high state of maintenance readiness and personnel readiness, since Soviet sailors are not allowed far from port in large numbers. The majority of the fleet could put to sea in 48 hours.⁹ Some Soviet Northern fleet SSBMs can hit the US from port and thus need only to move a short distance to sea for dispersion and larger US homeland target coverage. Seeking strategic surprise the Soviets are likely to make some sacrifices; a less than fully deployed navy is an obvious choice. At any rate, a 48-hour deployment is in itself in keeping with strategic surprise. If hostilities did not begin immediately there would likely be no NATO total commitment for a day or more while diplomatic solutions were pursued in which time the fleet could disperse even further and organize a sea denial operation.

The current high production rate of the Backfire gives the Soviets an added naval punch. For whatever roles it may eventually play, it is clearly designed as a naval attack platform. Its long range and heavy payload of anti-ship stand-off missiles

greatly increase the sea denial capability of the WP. From bases on the Kola Peninsula it can interdict the US European sea lanes and European ports and return without flying over land.

The Theater Nuclear Balance

The most difficult assessment to make and the one least treated in open literature is the theater nuclear balance between the WP and NATO. The emerging offensive role of the WP nuclear capable air forces and deployment of the new mobile SS-20 missile with MIRV warheads heighten the importance of this yardstick. Most sources give NATO forces some 7,000 tactical nuclear warheads and the WP about 3,500. That assessment is very controversial. Air Vice Marshall Menaul, Director-General of the Royal United Services Institute for Defense Studies (RUSI), states: "...only the foolish or the incredibly naive believe that the Soviet nuclear stockpile for use in tactical operations in Europe is exactly half that of NATO". He went on to say that the 7,000/3,500 "myth" has been perpetuated ever since McNamara (former US Secretary of Defense) first announced it. Given the improvements made by the Soviets in the last decade Vice Marshall Menaul states that it is inconceivable that the Soviets have not improved the quantity and quality of its nuclear stockpile. "To assume otherwise is to misinterpret Soviet ambitions and to underestimate their capability".¹⁰

Whatever the actual warhead count may be, NATO suffers from certain vulnerabilities that, in a short-warning attack scenario, could negate any numerical advantage if it existed. For example, NATO nuclear storage site locations are certainly well known and easily targeted by Soviet missiles. In a surprise attack NATO nuclear armed quick reaction alert (QRA) aircraft are not likely to receive nuclear release authority before they would have to return to damaged airfields.

Other Measures of the Balance

There are several other important aspects of the military balance which are not covered herein, but are relevant to the equation. These include, for example, measures of quality of men and equipment, political will, reliance of allies, morale factors, training, experience, etc.¹¹

One of the more important factors is the chemical and biologi-

cal warfare capability balance. "Imbalance" would be a more proper term in this case. Whereas the WP is well trained and equipped to fight in a chemical or biological environment, very little can be said in favor of NATO capabilities. While the West has chosen to follow the Geneva accords and has all but eliminated its stockpiles, the WP has continued development and has clear superiority. The late Chairman of the JCS, General George Brown, stated that WP superiority in training, equipment and specialized personnel and facilities all point to a superior offensive and protective capability.¹² He further stated that WP doctrine envisions the employment of chemical weapons in conjunction with either nuclear or conventional weapons, especially against enemy nuclear delivery means.¹³ Faced with the WP employment of chemical or biological weapons in a future conflict, how would NATO respond in the absence of like weapons: no response or with the only means of mass destruction in its inventory - nuclear?

Is There a Threat?

Most analysts would agree that the Soviet Union is not likely to choose to go to war against the combined might of the West. On the other hand, most would have said the same of the Arabs as they faced the Israelis in October 1973. The decision to seek very limited military objectives involving great risk in order to obtain political objectives was a successful strategy. Since the recent Arab-Israeli negotiations have ended in a treaty, the initial Arab military success has been greatly multiplied. Would the WP risk the same venture? To answer a flat "No" is to ignore Soviet accomplishments and military trends. Perhaps in one decisive stroke the Soviets could make the world safe for communism. Maj. Gen. George Keegan, retired Air Force Assistant Chief of Staff for Intelligence, has likened the current US attitude to that of England in the mid 1930's. "We are threatened, but do not perceive. We seem incapable of being warned, because we refuse to believe ill of our enemy."¹⁴

Soviet military trends cause a great deal of concern in the West as the following statements attest. US Senators Sam Nunn and Dewey Bartlett in their now famous report to Congress in January 1977 testified:

The viability of current NATO force posture in Europe and perhaps even NATO's strategy of flexible response and forward defense is questionable. There now exists a disparity between the alliance's declared strategy and the ability of NATO forces to implement this strategy.¹⁵

General George Brown remarked:

In looking back over my previous reports to you, I am struck by the fact that in nearly every area of military strength there has been a relative decline over the years in relation to the Soviet Union, our principal potential adversary.¹⁶

In 1973 former Secretary of Defense Rumsfeld reported in the annual DOD report:

Three rather definite statements about developments in Soviet nuclear programs can be made: (a) whatever their motives, the Soviets have greatly expanded and improved their strategic posture. (b) Soviet programs do not reflect an interest in deterrence by massive retaliation alone; their strategic nuclear posture is developing a war-fighting capability. (c) While the Soviets are not likely to succeed in the admittedly complex, costly and difficult task of achieving meaningful nuclear superiority, it is clear that their capabilities are taking them in that direction.¹⁷

Some of the more important trends in Central Europe causing concern can be summarized as follows:¹⁸

1. A 31 per cent increase in numbers of tanks between 1968 and 1977. Older model tanks were put into storage in East Germany as the newer T-62 and T-64 models arrived. One of the more interesting changes has been the 41 per cent increase (from 188 to 266) in the number of tanks in the Soviet motorized rifle division. This figure is only 59 short of the total number of tanks found in a Soviet tank division. The new T-72 is now being introduced and a newer T-80 appears to be in the testing stage in the Soviet Union.
2. A 38 per cent increase in the numbers of artillery pieces between 1968 and 1977. Division artillery in a tank division has risen from 36 to 54 towed guns and in the motorized rifle division the number of guns has increased from 105 to 144, multiple rocket launcher tubes have increased from 200 to 720, and the new SP-74 122mm and SP-73 152mm self-propelled guns have been introduced.
3. A 79 per cent increase in the number of armored personnel carriers and reconnaissance vehicles between 1968 and 1977.
4. An increase in the number of Soviet divisions from 22 to 31 between 1966 and 1976.
5. An increase of 120,000 Soviet personnel between 1973 and 1976.
6. The proliferation of mobile air defense systems including the SA-7 at platoon level, the SA-9 (first seen in 1975) and older ZSU-23-4 at regimental level, the SA-6 (which proved extremely effective in the 1973 October War) and the SA-8 (first seen in 1975) at division level.

7. Significant increases in the quantity and quality of bridging equipment at all levels including prepositioned stocks near the borders.
8. Increases in strategic and tactical airlift capability.
9. The transformation of Frontal Aviation from a short-range air defense force to one of close air support and medium-range interdiction.
10. A growing helicopter lift and assault capability with an increase in MI-8 transport helicopters and the world's most heavily armed attack helicopter, the HIND-D. Air-landing assault regiments have been identified at Parchim and Stendal which together can lift about 17 assault battalions.
11. Increased stockpiling of ammunition and POL in East Germany.
12. Deployment of the SS-20 MREB which can reach any target in West Europe from a mobile launcher located in western military districts of the Soviet Union.
13. Deployment of the new SS-21 mobile missile in GSFG.

NATO forces have also made qualitative and quantitative improvements within the last decade. However, the net result is that, when comparing NATO and WP capabilities, NATO has lost substantial ground. This, therefore, is the worrisome trend. As President Carter remarked at the 1977 North Atlantic Summit Meeting in London:

The threat facing the Alliance has grown steadily in recent years. The Soviet Union has achieved essential strategic nuclear equivalence. Its theater nuclear forces have been strengthened. The Warsaw Pact's conventional forces in Europe emphasize an offensive posture. These forces are much stronger than needed for any defense purposes. Since 1965 new ground and air weapons have been introduced in most categories: self-propelled artillery, mobile tactical missiles, mobile air defense guns, armored personnel carriers, tactical aircraft, and tanks. The Pact's build-up continues undiminished.¹⁹

The threat is real and the situation is likely to get worse before it gets better; at least strategically, when the US Minuteman ICBM force reaches its most vulnerable period in the early to mid 1980's. Retired Lt. Gen. George Seignious, replacing Paul Warnke as US chief SALT negotiator, recently warned that the Soviet ability to launch a preemptive strategic strike is growing.²⁰ It is conceivable that with a small portion of its strategic missiles the Soviets could destroy a large number of US ICBMs in a single surprise strike. Faced with the prospect that even after a US counter strike the Soviets would have sufficient surviving warheads to destroy major US population centers, would a US President launch a counter strike?

At the theater level one must view all measures of a military balance with some degree of tentativeness. At best the current NATO/WP military balance is confusing due to the number of possible variables that can be added to the equation; with the proper combinations or omissions of figures one can prove superiority or inferiority of either side. Neither side can now be said to possess significant advantages over the other. Although the WP military capabilities are growing at a rate faster than those of NATO, good cause for concern, one cannot deduce WP intentions from its improved capabilities.

WARNING TIME

Former Secretary of Defense Donald Rumsfeld stated the following in his FY 1978 Defense Department report:

The standard planning assumption is that NATO would have fairly clear warning of Pact intentions to attack, would begin its mobilization and deployment within a few days after the Pact's and would, accordingly, have time in which to build up its defenses...²¹

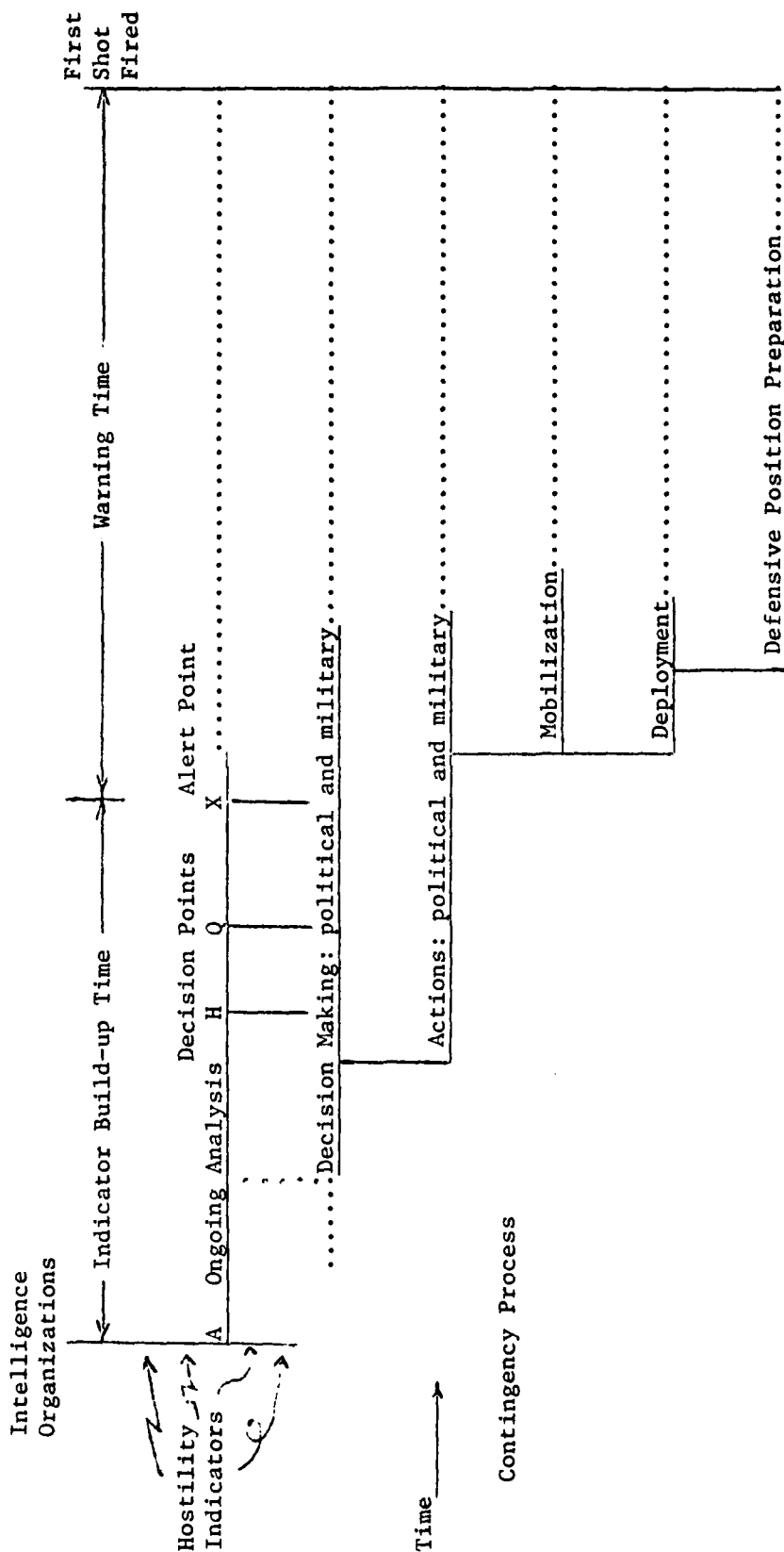
Senators Nunn and Bartlett reported to Congress in 1977:

Soviet conventional forces in Europe...have an ability to initiate a potentially devastating invasion of Europe with as little as a few days warning...While Soviet forces in East Europe can initiate a conflict from a standing start, NATO forces continue to require warning time of a duration sufficient to permit the alliance to mobilize and deploy to the center of conflict its ultimately greater but typically less ready and poorly deployed forces.²² (emphasis added)

These statements are indicative of the confusion and controversy concerning warning time.

Nowhere in the literature is there an adequate definition of warning time. Since it is a critical element of NATO and WP contingency planning, the following diagram with the accompanying explanation will clarify its importance. All-source intelligence is monitored by a few organizations including, in the case of the US, a special European Command (EUCOM) staff section. A constant monitoring of a "watch list" of 505 discrete indicators (over 700 counting subsets) insures that WP activities over a broad spectrum are compiled and analyzed for possible indications of hostilities.²³ A daily estimate based on indicator fluctuations is prepared. Point 'A' depicts the beginning of the time period during which the "watch list" is monitored for any build-up of hostility indicators.

WARNING TIME



At some point in time enough indicators will reach a designated level at which a contingency planning process begins. This "decision point" could have multiple positions. Decision-making during the entire process ranges from attempts to apply political pressure to halt the Soviet and WP activities causing alarm to taking immediate military measures such as deployment to defensive positions. For example, at point "H" nothing more than an upgrading of the Defensive Condition (DEFCON) may be required (such as occurred during the Arab-Israeli 1973 War). At point "Q" more severe decisions will be made (such as evacuation of dependents from Europe and intense political activity designed to halt a growing East-West crisis or halt overt military mobilization). However, at point "X" there is no doubt as to an imminent attack. Point "X" then is the Alert Point: that point at which the probability of a WP attack reaches such a level that the political decision is made to initiate overt military preparations. As the distance from point "A" to the Alert Point decreases, the greater the problems for NATO, since the opportunities to apply political pressure or bring NATO forces to higher states of readiness will be reduced.

Warning time for the military commanders begins at the Alert Point, but it includes the time required for information exchanges between NATO headquarters and the heads of each member nation, the time needed to obtain nuclear release authority from the US President if it is required, and the time required to transmit deployment orders to NATO units.

One of the most critical elements in the entire process is the correct determination that the alert point has been reached. A NATO mobilization and deployment forward upon the erroneous conclusion that the alert point had been reached could provoke a WP preemptive attack when none had actually been intended. Far more likely would be a NATO failure or refusal to believe that the alert point had been reached. Both errors are equally dangerous.

Out of 500 indicators there are probably no more than a dozen absolute indicators of impending hostilities. Hopefully, those indicators are so weighted that they are not lost among the hundreds subject to WP deception measures. After several expensive mobilizations in response to Arab maneuvers, the Israelis, in October 1973, assumed Arab activities to be one more routine exercise. Despite the fact that another war was expected sometime in the near future, the Arabs achieved strategic and tactical surprise. What was once an anomaly came to be counted as routine. Hopefully the system is sensitive to both a long (years) and short (hours, days) indicator build-up time.

At some point in the contingency process several military actions

must be taken: mobilization, deployment, and preparation of battle-field defensive positions. As the time line from the alert point continues to the point where the opening volley is fired, (such as in a long-term crisis with a slow but deliberate buildup by both sides) the more varied or graduated the required actions may be. The timing of the deployment could be critical; too early and the defensive positions could be targeted for massive strikes or very likely bypassed by attacking WP forces; too late and WP forces could reach initial NATO defensive positions first.

Finally, at some point the first shot is fired. Warning time ends here. Thus, warning time is that time period beginning at the point where a number of possible indicators of potential enemy hostilities reaches a level causing the implementation of planned and/or unplanned contingency processes, including political and military decisions and actions, and ending with the first engagement of WP and NATO forces. The definition is simple but the process is complicated and fraught with potential breakdown. The diagram is ideal in that it shows the first shot fired after NATO has had time to move to its forward defensive positions. With months of warning time NATO could mobilize every bulldozer in West Europe and dig a series of antitank ditches from the North Sea to Czechoslovakia! In the worst case the first shot could be fired before the Alert Point is reached. Given the decision to go to war the WP will strive for the latter case in order to tip the balance as far as possible in their favor.

Current Estimates of Warning Time

Estimates of how much warning time NATO would likely have prior to a WP attack are based on classified studies and only infrequently mentioned in open literature. Interest has recently increased as the result of a statement made by General Alexander Haig, former Supreme Allied Commander Europe, in which he stated that NATO could count on eight to fourteen days warning time.²⁴ More recently NATO and EUCOM staffs have estimated that a 48-hour warning time period is possible, but not probable, as it would be a very high-risk option. The 48-hour period is cited as the minimum time required to flesh out category two divisions and required for a maintenance stand down period during which 85 percent of WP fighter/attack aircraft could be made combat ready.²⁵

Warning time estimates are heavily dependent on the assumed speed with which the WP and necessary Soviet reinforcing units can mobilize and how soon in the process detection can be made. Mobilization time is dependent on a multitude of factors such as road net capacities, supply status of units, the time required to establish war-time command and control facilities, etc. The speed with which mobilization can be accomplished is important, as it

directly affects the combat power advantage one side can bring to bear at a given time. At about the fourteen day mark the WP advantage in manpower begins to slip as NATO brings its ultimately superior forces into the theater.

In summary, understanding warning time and its ramifications for NATO and the WP is a necessary step for understanding the theater military balance. As warning time can be reduced by an attacker, the greater the military advantages he can accrue. As the amount of warning time increases, the more opportunities will be available to take political action to avert a conflict and the more time will be available to take military measures to conduct a successful defense. Although a 48-hour warning time period is seen as possible, it is considered as very unlikely by NATO due to the problems it is perceived to present the WP. NATO is counting on a period of eight to fourteen days to prepare for a WP attack. Part II of this paper will attempt to present the Soviet view of warning time and conclude whether or not NATO's warning time predictions are accurate.

CONCLUSION

Part I has presented several important aspects of the current military situation between the WP and NATO in Europe today. Particular attention has been given to warning time as it relates to military balance calculations and as seen from NATO's viewpoint. The amount of warning time available for NATO to mobilize and deploy to its forward defensive positions becomes more critical as the time required by the WP to launch an attack decreases. The amount of warning time available has a direct effect on the military balance: the shorter the warning time for NATO, the more the balance tips in favor of the WP. The Soviets will employ all means available to keep NATO's warning time to an absolute minimum.

It must be noted that military balance calculations, force ratio calculations, breakthrough force ratios, etc., are open to a great deal of manipulation and interpretation and largely depend on the input to the equations. The results are often heavily dependent on desired outcomes. What forces are counted, how fast the WP is assumed to be able to mobilize and what forces it will mobilize, and dozens of other subjective estimates which are highly dependent on the scenario chosen must be part of the input data. These problems, however large, must be recognized and dealt with, as accurate estimates of the balance are important for NATO defense planning and for defense budgeting. The current drive to increase each member's defense budget is evidence that the military balance is important and perceived to be moving in an unfavorable direction. The trends in WP defense

spending and weapons development over the years is much more indicative of cause for concern than a static balance calculation for any one point in time. The trends are most clear: NATO has gone from a position of clear superiority to a position of parity to a position of clear inferiority in some areas. The relentless Soviet drive shows no sign of letting up; in fact there is every indication that just the opposite is true. The Soviet objective is to put into the hands of the WP a capability for war-fighting and war-winning. As Colin Gray recently put it: "Show me your programs and I'll show you your policy."²⁶

PART II

A LOOK DOWN THE SOVIET GUN BARREL

INTRODUCTION

The purpose of Part II is to assess the view of theater war in Europe as presented by Soviet open source military literature. The problem here, of course, is that nowhere in open source literature do the Soviets spell out how they would attack NATO should the political decision be made to do so. On the other hand, open sources are extremely valuable in discerning general strategy and tactics and their changes and trends over time. Detailed descriptions of battalion-level tactics are prolific in Soviet military literature, but tactics peculiar to division and higher levels are more rare. There is a need to educate a vast number of Soviet and WP regular and reserve officers concerning military affairs. This need is accomplished through open source literature and, therefore, these sources are valid intelligence. In the words of former Soviet Defense Chief, Marshal Grechko:

We have never hidden and are not hiding the basic principle positions of our military doctrine. They are expressed with utmost clarity in the policies of the Communist Party and the Soviet Government, in the state of the armed forces.¹

As previously noted, two questions are central to this study: (1) How viable is the short-warning attack scenario? (2) Will nuclear weapons be employed from the beginning of an attack? In each of the following sections a specific topic from Soviet sources is presented. The list of topics is by no means complete, but includes the most important elements needed to answer the two central questions. Taken together these topics form an overall picture of the Soviet view of a European theater war. If the answers to these two questions taken from Soviet sources coincides with NATO expectations, assessments and defensive planning as outlined in Part I, then NATO's problem is one of implementing existing contingency plans. If, on the other hand, the answers are significantly different, NATO may be planning to win the wrong first battle.

SURPRISE

A central theme running throughout Soviet military literature is the necessity for obtaining surprise. The Soviets feel that from the lowest tactical element up to the strategic level surprise must be worked and planned for; only rarely if ever will opportunities for surprise occur accidentally. The Soviets define surprise as:

One of the principles of military art, ensuring success in battle and in operations. Surprise makes it possible to

inflict heavy losses upon the enemy in short periods of time, to paralyze his will, and to deprive him of the possibility of offering organized resistance. Surprise is achieved in the following ways: by using various types and methods of combat; by misleading the enemy as to one's own intentions; by safeguarding the security of operational plans; by decisive actions and skilled maneuver; by unexpected use of nuclear weapons; and by using means and methods with which the enemy is unfamiliar.²

In the event of a war in Europe the Soviets will seek to achieve strategic surprise. The Soviets have learned the lessons of surprise well from their experiences in World War II; from their first battle which they lost soundly to their last battle which they won overwhelmingly. The Germans achieved strategic surprise in June 1941 when they attacked the Russian Army in Operation Barbarossa, despite the fact that adequate indicators of a pending attack had been in the hands of Stalin and his staff for a considerable period before the attack. There was enough evidence to provide a clear warning, but it was not recognized or acted upon. The momentum gained by surprise carried the attacking Germans to the gates of Moscow and Stalingrad.

In August 1945 the Soviets practiced what they had learned by gaining strategic surprise against the Japanese in the Manchurian campaign. The Japanese were expecting a major attack in September after the dry season had begun. The Soviets claim that they picked the rainy month of August despite lowered ease of trafficability, as the Japanese would least suspect an attack then. Japanese intelligence also expected that, because of a major mountain range along the border considered to be impassable with tanks, the major attack would come through the only pass (an ancient trade route) into Manchuria. The Soviets sent the newly created 36th Army made up of mostly old men through the pass to deceive the main Japanese defenses while an entire tank army crossed the mountains almost undetected. To further the deception diplomatic relations with Japan were maintained up to the minute of the attack.³ The victory was complete in a matter of days.

The lessons of surprise learned in WWII are stressed in current Soviet military literature by General Lomov, Colonel Savkin, and Marshal Sidorenko:

Surprise is achieved by confusing the enemy of one's intentions by keeping secret the overall purpose of the forthcoming actions and preparations for them, by rapid and concealed concentration and deployment of forces in the region of making the strikes, by the unexpected use of weapons, and particularly nuclear ones, as well as by the use of tactical procedures and new weapons unknown to the enemy.⁴

Surprise has been a most important principle of military art since olden times. The employment of nuclear weapons has considerably increased the role and importance of surprise.⁵

With the employment of nuclear weapons, the decisiveness and scope of the offensive are increased, the times for the attainment of its goals are reduced, and the significance of surprise and the time factor increases even more.⁶

With or without nuclear weapons surprise is the key which unlocks the door to many other prerequisite principles for victory. For example, gaining and maintaining the initiative is heavily stressed in military writings. The side which can maintain the offensive momentum can deny the enemy the opportunity to organize and mount an effective defense. Surprise is the best method for gaining the momentum. Once gained it must be exploited by high speed operations through the depth of the defenses by continuous day and night operations. The complete mechanization/motorization of WP combat units secures the capability for rapid movement and concentration of forces to gain the initiative.

In short, surprise is a prerequisite to success in war. It is obtained by secrecy in preparation and deception in intent in both political and military activities. Surprise does not mean that an enemy be taken completely unawares, but that he recognises the intent too late to take effective counter-actions.

PREEMPTION

Preemption - with the use of either nuclear or conventional means - is seen by the Soviets as the best method of achieving surprise and turning the tide of the ensuing battle in one's favor. The premise is simple: he who shoots first greatly increases his chances of winning. A recently declassified article from Voyennaya Mysl by Soviet Marshal Moskalenko states:

In view of the immense destructive force of nuclear weapons and the extremely limited time available to take effective counter measures after an enemy launches its missiles, the launching of the first massed nuclear attack acquires decisive importance for achieving the objectives of war.⁷

In his 1970 book The Offensive, Soviet Colonel Sidorenko, Doctor of Military Science (a prestigious degree), noted: "It is believed that the side which first employs nuclear weapons with surprise can determine the outcome of the battle in his favor."⁸ Sidorenko further writes:

To attain the greatest effectiveness, it is recommended that the nuclear strikes be launched at the start of the fire preparation unexpectedly for the enemy. Preemption in launching a nuclear strike is considered to be the decisive condition for the attainment of superiority over him and the seizure and retention of the initiative.⁹

The use of only a few nuclear weapons early in an offensive, targeted against a small number of NATO's critical command and control centers and nuclear weapons storage sites, could have a devastating effect in terms of the confusion and panic they would cause. Even if complete recovery were made in a day or so, the time would be long enough to allow a deep initial WP penetration.

The sudden launching of nuclear strikes may cause panic and confusion in the ranks of the defenders. A portion of the personnel, even if it has not landed in the sphere of immediate destruction, may be stunned, disorganized and lose its self control...This unseen danger of irradiation and ignorance may cause a sense of alarm, fear, and excited state and passivity in actions which will lead to reduction in the combat qualities and activity of the personnel.¹⁰

Targeting against critical US installations in West Germany can be accomplished by dedicating only a few missiles due to the relatively small area (about a 50 mile radius) in which they are located. (see Map).

A Naval War College researcher recently stated: "In essence, Soviet strategists must seek a fait accompli - or initial condition from which the future course of battle (if this should be necessary) must run in their favor." The Soviet objective is to disarm NATO to an extent relative to the power reserved by the Soviets, so that resistance to Soviet dictation will appear to the West as futile. While a Soviet strategic first strike could not eliminate the US capability for a severe counter-value retaliation, the Soviets can deter such a strike with an even more powerful matching threat.¹¹ With full deployment of the MIRV'ed SS-20 such a threat has the same potential on the theater level.

In short, the Soviets see preemption as the best method for achieving surprise on any level; strategic and theater. NATO has made it clear that it feels free to employ nuclear weapons first in a defense of its territory. General Haig, former Supreme Allied Commander of NATO forces, has stated: "...an imbalance between the West and the Soviet bloc in conventional weapons inevitably increased the prospect of an earlier employment of nuclear weapons to halt any Soviet attack."¹² Given the decision to go to war, the WP would be indeed foolish to willingly absorb the first nuclear strike before opening its nuclear volley. Although it is possible that a surprise attack could be so designed that NATO's nuclear

threat in the theater could be eliminated with conventional weapons, the probability is remote. With the use of a nuclear preemptive strike the task is much easier, quicker, and accomplished with a higher degree of probability of success.

Mobilization

Mobilization in Soviet military writings is treated quite differently than in the West. Nation-wide mobilization is regarded by the Soviets as necessary only in the event of a long protracted war. Despite recent improvements in WP logistic capabilities to support a long war, it is doubtful that this is the envisioned scenario. Soviet category three units and other homeland based units need be mobilized only when an attack is begun or at that point where the Soviets feel NATO cannot take effective counter-measures. Limiting the initial mobilization to an absolute minimum, the WP will rely on regular forces which are maintained at high states of readiness in peace time for the initial attacking echelons. Soviet Marshal Sokolovskiy has written:

The solution to this problem would be to maintain in peace time those armed forces which would be in a position to reach at least the nearest definite strategic war objectives before successive echelons are mobilized and put into action.¹³

Soviet General - Major Vasendin has remarked that the achievement of surprise is enhanced by having strategic nuclear forces in constant readiness which "...increases the capability of attacking with previously prepared forces and means without carrying out mobilization and the complex series of preparatory measures."¹⁴

Dr. Lawrence Whetten, participant in a private project which collected information from WP defectors in the early to mid 1970's wrote:

All defectors I have debriefed, including some of the leading planners, claim that the Pact first echelon forces are on 1½ hour constant alert...They anticipate tactical surprise in that their movements will be detected at only about 75-100 km. from the hostile border... Second echelon forces have a longer alert commitment of 2-6 hours. This is not only because of the location but because they are expected to be at 100% strength when they reach the combat area. Because of the (short) alert status, first echelon forces...may be committed at only 30% strength.¹⁵

There can be little doubt that the Soviets comprehend NATO's

ability to detect WP mobilization through various means. Reading Western sources, they also have an appreciation for the warning time NATO is counting on. Steps will be taken to limit both.

Concealed mobilization is possible even under present day conditions, but it will be realized somewhat differently than previously. As the relationship between the belligerents becomes increasingly strained, a part of the armed forces intended for the solution of problems of the initial phase of the war gradually will be brought into a state of complete combat readiness. However, it must be borne in mind that with present day means of strategic reconnaissance, widespread mobilization measures, even though concealed, cannot go unnoticed. Therefore, all the leading countries of coalitions strive to keep their armed forces in a maximum state of readiness.¹⁶

One of the standard reasons for undertaking a mobilization prior to the outbreak of hostilities is to generate a favorable force ratio to increase chances for success. There is no firm force ratio rule in Soviet military writings, but references of at least 3:1 and preferences to 5 or 6:1 are found just as in Western military writings. From data compiled in The Military Balance the following peace time force ratios can be computed for WP and NATO forces in the northern and central regions:

	WP	:	NATO
artillery	3.7	:	1
tanks	3	:	1
tactical aircraft	1.4	:	1 (4.7:1 in interceptors)
divisions	2.6	:	1
manpower	1.5	:	1

These data take on great significance only when viewed from the Soviet perspective of the offense and the ratios required to conduct a breakthrough. Since WP forces are highly mobile, forces can be rapidly concentrated to dramatically increase the ratios on a narrow front.¹⁷ Existing peacetime force ratios may, therefore, be sufficient for an offensive and require little, if any, mobilization. In fact a noted Soviet military writer, Colonel Savkin, has stated:

With the mass introduction of nuclear missiles into the armed forces of the imperialist states, Soviet military science arrived at the conclusion that war can be begun by available groupings of troops, and not by previously mobilized armed forces, and that the beginning of a war can have a decisive effect on the outcome...Reliance on

available forces in such a war comes from the fact that it may not be long in duration, since the outcome of a military engagement in it may be predetermined by the very first massive nuclear strikes.¹⁸

With the use of nuclear weapons the existing force ratios can be altered in a single strike.

In summary, the Soviet concept of mobilization is directly related to the principle of surprise. The Soviets recognize that long-term or large-scale mobilization can be detected and that, eventually, force ratios will move in favor of NATO. Keeping the chances of detection to a minimum and force ratios in their favor to a maximum are the goals of WP mobilization. Nuclear weapons are recognized as a means of instantly achieving surprise and altering force ratios. The WP will strive to keep the time and scope of mobilization to an absolute minimum and attack with in place forces, which will greatly reduce NATO's warning time.

THEATER DOCTRINE

In the early 1960's Soviet military writings clearly portrayed the supremacy of the nuclear weapon on the battlefield. Krushchev reduced the size of the ground forces and relegated them to a secondary role in theater war. At the same time he organized the Strategic Rocket Forces and declared that the nuclear missile would be the means by which any future war would be fought. In the early 1970's an interest in purely conventional operations began to appear in the Soviet military press. That interest continues today, but there is disagreement concerning its significance. Some analysts believe that it is an indication that the WP now intends to fight any war in Europe with only conventional means; others feel that WP leaders are not that confident and still plan for the use of nuclear weapons at some stage during the offensive. The following examination of Soviet sources is an attempt to understand the essence of WP theater doctrine and to discover the proper role of nuclear weapons in a WP theater offensive.

The Offensive

The authors quoted below, Marshal Sokolovskiy, Colonel Sidorenko, General Lomov and General Reznichenko respectively, are among those considered to have produced significant Soviet military doctrinal writings on the subject of theater war. Their works are part of the military library that each Soviet officer is encouraged to acquire and read.

The basic means for armed combat in land theaters in a future world war will be the nuclear weapon used primarily with operational-tactical missiles, and also frontal aviation...The motorized infantry will be just as important, although it will not be the "queen of battle" as in past wars. On the battlefields the decisive role will be played by fire of nuclear weapons; the other means of armed combat will utilize the results of nuclear attacks for the final defeat of the enemy.¹⁹

Under contemporary conditions nuclear weapons become the main means of delivering the main attack.²⁰

The basic method of the offensive is the making of nuclear strikes against selected axes and the rapid advance of tank and motorized rifle units and formations deep into the defended area through the breaks which have been formed.²¹

The principle means of destroying an enemy in contemporary combined arms combat are nuclear weapons.²²

The Soviets recognize the unique nature of nuclear weapons, the advantages and hazards they offer and they train extensively for their use. US and NATO forces on the other hand, rarely train under simulated nuclear conditions and greatly suffer from a lack of a comprehensive tactical nuclear doctrine.²³

John Collins, in his recent book, comments on the so called "anti-tank debate" in the Soviet military press. It seems that after reviewing the staggering armor losses incurred by both sides in the 1973 Arab-Israeli war, the Soviets set out to rethink their doctrine which calls for high speed attacks by armored formations. A well organized anti-tank threat would cause considerable slowing of the advance and greatly reduce the shock effect of armor, since troops in the lightly armored BMP personnel carrier would be forced to dismount to continue the attack. There are three possible solutions: (1) the employment of nuclear weapons forcing the enemy to disperse and thus allowing easier penetration by attacking formations, (2) the use of massive suppressive artillery if it were well protected and self-propelled or (3) the employment of maneuver instead of fire. Collins concludes that one course or some combination of them may eventually win out, but the simplest method is the first.²⁴ On that note, Peter Vigor, Head of the Soviet Studies Center at Sandhurst, Great Britain, writes:

...the Russians would like [best] of all to fight a conventional offensive only; but that whatever happens, they are determined to win if they have to attack at all. If, therefore, at the moment when an attack becomes an imperative for them they find that the state

of NATO defences makes it somewhat doubtful that they would win, then I have no doubt but that, under such circumstances, they would be perfectly willing to consider using theater nuclear weapons and even preempting with theater nuclear weapons rather than not gain their victory.²⁵

Christopher Donnelly, Vigor's coworker, while agreeing that the Soviets above all want to win a war in Europe without resorting to nuclear weapons, also has noted in his ongoing analysis of Soviet military writings that there is renewed serious discussion of theater nuclear weapons to solve problems expected on the battlefield of the future. He finds that writings at battalion level indicate that commanders feel that the high rates of advance required cannot be maintained if the battalion must break through two consecutive prepared defences. Artillery writers are now saying that if stiff resistance is met they cannot provide the fire rates required, as the fire of dispersed artillery units cannot be effectively controlled to provide the needed volumes at the right time.²⁶ Donnelly thus provides some perspective on how far one can claim that current writings show a predominantly conventional orientation.

Mass

To further clarify the Soviet claim that nuclear weapons are the main means of conducting an offensive a look at the principle of "mass" is instructive. Massing troops and equipment in historical terms was always an important prerequisite to success in battle, as it altered the correlation of forces in favor of the massing army. Although the Soviets must rely on this principle in order to assure a successful breakthrough, the massing will not necessarily occur as in the past; i.e. World War II. A typical Western viewpoint was expressed by former Secretary of Defense Schlesinger:

WP conventional air and ground forces would likely have to mass to penetrate NATO defenses successfully. However, NATO theater nuclear forces deter this massing, thus enhancing NATO conventional defense capabilities.²⁷

However Schlesinger's statement needs to be considered in light of the following Soviet writings.

In modern combat, superiority over the enemy is achieved primarily by concentrating the fire efforts of the forces and mainly the nuclear strikes...It is extremely important to concentrate the necessary forces and means

on the direction of the main strike in rapid and covert manner, from different directions and only for the time necessary for making the strike. As soon as such necessity is passed, the troops must be immediately dispersed.²⁸ (emphasis added)

The massing of nuclear strikes, and not of conventional forces and equipment, assumes prime importance.²⁹

...through concentrations of fire of all forms, and, first of all, through the use of nuclear strikes, it is possible almost instantly to change the balance of forces and means in one's favor in a chosen area or sector. Furthermore, the great range of rockets makes it possible to inflict powerful nuclear strikes from rocket launchers far to the rear, while full motorization of troops permits rapid concentration of this strength when units are deployed over a relatively large area.³⁰

A further break from the World War II stereotype of a massed attack is shown in the changing concept of the classical breakthrough operation.

Under conditions where nuclear weapons are employed, the breakthrough as a method of smashing the defending enemy and overcoming his defenses will no longer have such decisive significance as formerly. The primary method of attack will be the launching of nuclear strikes and the swift advance of tank and motorized rifle [units] into the depth of the enemy's defense through the breaches formed by nuclear weapons.³¹

The Soviets have always treated war as an extension of politics; contrary to the Western concept of war being a breakdown of politics. The Soviet view attaches much less significance to the use of nuclear weapons than Western concepts of war avoidance. The primary mission of the entire Soviet system in time of war is simple: to win! The international political and economic ramifications of losing would be disastrous; the Soviet Union as it exists today would certainly be dismembered and East Europe would be allowed to go its own way. Communism as the Soviets have it would disappear completely.

In summary, whether it be from the beginning or at some point during the offensive, the employment of nuclear weapons is seen as the primary means of insuring success. Faced with a NATO defense where attacking echelons would have to spend considerable time fighting their way through, the Soviets would be violating their stated necessity for the high speed offensive. Faced with well organized successive strong points defended by large numbers of long range anti-tank weapons the Soviets would be in danger of being

drastically slowed or even halted. Such prospects standing in the way of WP victory will be eliminated as quickly as possible to regain the initiative. The avenues of approach into NATO's rear areas are likely, therefore, to be cleared with the means most likely to insure success: the nuclear weapon.

The Nuclear/Conventional Integration

The biggest distinction between Soviet and Western concepts of theater operations is the Soviet emphasis on nuclear warfare. Whereas Western formations are designed for operations on the conventional battlefield, Soviet units are clearly designed for the opposite. In other words, there is a fundamental difference in the foundations upon which Western and Soviet combat units are configured. The Western configuration (equipment and personnel) primarily assumes a conventional battlefield upon which nuclear weapons may be necessary. The Soviets assume a nuclear battlefield where conventional operations will also be a necessity. The West seeks an "either/or proposition" concerning nuclear weapons in theater doctrine, whereas the Soviets have imposed an integration.

The emphasis on combined arms operations is evident throughout Soviet military writings. All Soviet and WP divisions are mechanized; either motorized infantry or tank divisions. Except for the airborne division, each type of division contains a major element of the other: the tank division contains three tank regiments and one motorized rifle regiment, the motorized rifle division contains more than the equivalent of two tank regiments. Even the airborne division has a great deal more mechanized capability than its Western counterpart. Soviet and WP divisions are true combined arms forces.

A look at Soviet equipment reveals the interest in the integration of nuclear and conventional capabilities. The BMP, for example, is designed and equipped to operate in both nuclear and chemical environments. It is designed to move personnel rapidly through contaminated areas and is equipped with individual filtration masks for CBR protection. The squad may remain seated and fire from side ports while on the move. Although this vehicle has been in the inventory for several years the closest US counterpart is still several years away. Decontamination vehicles are another example of the emphasis placed on nuclear and chemical warfare in combined arms operations. These vehicles are present in quantity at the division level and are frequently operated during field maneuvers.

A lengthy quote by Siderenko best sums up the Soviet view of the relationship between nuclear and conventional war needs.

...nuclear strikes do not represent some kind of isolated act, but a component of combat. The operation of motorized rifle (units) are closely coordinated with them. Nuclear strikes and troop concentrations represent a uniform and inseparable process, joined by a common concept. They must not be set in opposition to each other or separated, such as, for example employing nuclear weapons against objectives advantageous for them on one axis, and sending troops for operations on another axis...Preference (for the main axis) is given to those axes on which the terrain permits the employment of all combat arms, and above all tanks, and ensures the maximum use of maneuver capabilities of (units), concealed concentration and deployment of troops for an attack, and their swift advance into the depth right after nuclear strikes.³²

Former Secretary of Defense Schlesinger gave the following analysis:

The WP does not think of conventional and nuclear war as separate entities. Despite a recent trend to improve its conventional forces and to recognize that a conventional war in Europe need not escalate to nuclear war, the WP strategy, doctrine and forces are still strongly oriented toward nuclear operations.³³

In summary, nuclear weapons are not seen in isolation on the battlefield by the Soviets, rather, they are an integral part of combined arms operations. Conventional improvements have been made with the exploitation of nuclear strikes as the primary goal. In an offensive, terrain must be seized and controlled even after a nuclear attack; hence the dual Soviet interest.³⁴

Airborne Operations

At a time when the utility of airborne units is debated in the US military, the Soviets strive to improve the capabilities of their seven or eight airborne divisions. Although their performance during World War II shows that they were less than successful in almost all instances, they continue to play an important role. Two or three airborne divisions took part in the 1968 invasion of Czechoslovakia and two more were positioned to deploy into Rumania and Yugoslavia if needed. One division air-landed at Prague airport, but was fully equipped and prepared to jump if required.³⁵ Marshal Grechko and Colonel Sidorenko have pointed out:

In recent years, the airborne troops have developed rapidly.

Their mission is to wage combat in the enemy rear using nuclear attack means, to make rapid use of the results of nuclear strikes against enemy objectives located deep in the rear.³⁶

Under present conditions there are extended capabilities for building up efforts through employment of airborne landings. Landed from helicopters in the depth of the enemy's defense right after nuclear strikes, they can make more rapid use of their results than ground troops and can capture important areas, junctions of lines of communications, and crossings over water obstacles. They can hinder the approach of reserves and thus facilitate an increase in rates of the attack.³⁷

To maintain the speed and momentum of an attack and insure retention of the initiative, battalion-size operations will be common. These airborne or airmobile units will have missions of securing key terrain, road junctions, command and control facilities, bridges, etc.

In addition to regular airborne units, there are other special airborne and airmobile forces in all WP countries.³⁸ Parachuted or air landed into NATO territory their likely targets would include command and control facilities and nuclear storage sites. The chaos that a number of these teams could cause has the potential of inhibiting a timely response to WP attack indicators. Dr. Whetten writes:

...defectors who left the WP for the West from 1970 to 1974...claim that the Soviet plans called for the preemptive use by Special Forces to neutralize our nuclear storage sites and delivery systems at the opening of hostilities.³⁹

In short, WP airborne and airmobile units are designed to perform every mission from reconnaissance to sabotage to large scale operations in the NATO rear. These operations are seen as a logical extension of combined arms operations and amplify the Soviet design for integrating nuclear and conventional operations.

SELECTIVE TARGETING AND DAMAGE LIMITATION

It must be assumed that the Soviets have employed their most sophisticated means of analysis to determine the nature of any future war in Europe. The primary objective of such an analysis is to find those scenarios that would offer the best chances of winning. A major part of the analysis must be to determine those NATO capabilities posing the greatest threat to success and to de-

termine how to counter or eliminate those threats. The following statements by Soviet military writers make it clear what the Soviets perceive as the greatest threat to WP success.

The primary objectives in armed combat in the theater will be the nuclear weapons of the enemy. Without eliminating or neutralizing these nuclear weapons it is impossible to count on successful conduct of any military operations, offensive or defensive in the theaters.⁴⁰

The presence of nuclear weapons in the inventory and the numerous means of their delivery to the target have put forth one of the most important missions of contemporary combat - the combatting of these means...It is completely obvious that the successful conduct of the offensive is unthinkable without the timely and dependable neutralization of these means.⁴¹

For achieving the operational-level goal, it is now important to defeat not only the land and aviation enemy groupings in the theater of military operations, but above all its nuclear groupings, as without their decisive destruction one can sparsely count on the successful carrying out of the missions in the operation.⁴²

Thus NATO's nuclear capabilities (delivery means and storage sites) are a primary objective of Soviet targeting policy. Unfortunately, as was noted in Part I, this policy coincides with a major NATO vulnerability: the small number of non-dispersed storage sites.

According to the Soviets, NATO's nuclear threat will be combatted by all means available.

The presence of the enemy's nuclear weapons, which are the principle means of destruction and the basis of the combat power of his troops, causes a need for constantly combatting means of nuclear attack by all available means... Therefore, reconnaissance of the enemy's nuclear means of attack and their immediate destruction constitutes the main mission of troops in combat.⁴³

Chemical, nuclear and conventional weapons, airborne and airmobile operations, missiles and ground forces attacks are all treated in the Soviet literature as possible measures to be employed.

Soviet targeting policy is also indicative of the concern for damage limitation. It would be foolish to believe the Soviets plan an indiscriminate employment of nuclear weapons on NATO territory. The immediate problems it would create in just trafficability due to rubble, tree blow-down, large areas of contamination, etc. is more than sufficient motivation to select targets carefully. The Soviets emphasize speed and momentum in the offensive and this

simply could not be maintained in a super-saturated nuclear environment.

There are also socio-economic reasons for a damage limitation policy. It would be ludicrous for the Soviets to reduce Western Europe to rubble and then attempt to preside over what was left.⁴⁴ On the contrary, the rich industrial areas of the West would be a tremendous prize; especially if the Soviet homeland were heavily damaged. War recovery would certainly be greatly eased through control of West Europe's factories. Joseph Douglass points out that the Soviets are concerned with limiting damage to what is necessary and consistent with their political objectives.⁴⁵ The Soviets are interested in their post strike position relative to NATO. Only critical NATO elements need be targeted for initial elimination. Col Sidorenko amplifies:

It is believed that nuclear weapons as the main means of destruction, will be employed only for the destruction of the most important objectives; all other targets are neutralized and destroyed by the artillery, aviation and fire of tanks and other weapons. In other words, nuclear weapons are employed in combination with other means in accordance with the concept of the battle.⁴⁶ Use of nuclear weapons against insignificant, secondary objectives contradicts the very nature of this weapon.⁴⁷

The Soviet military journal Voyennaya Mysl' states in two different issues:

The objective is not to turn the large economic and industrial regions into a heap of ruins...but to deliver strikes which will destroy strategic combat means, paralyze enemy military production, making it incapable of satisfying the priority needs of the front and rear areas and sharply reduce the enemy capability to conduct strikes.⁴⁸

The main reason for a nuclear strike will be to destroy the military-economic potential, defeat the groupings of armed forces and undermine the morale of the population.⁴⁹

The mobile SS-20 is indicative of the Soviet capability and concern for selective targeting and damage limitation. Its accuracy has been improved tremendously over the SS-4 and SS-5 systems it is replacing: a circular error probability (CEP) of 440 yards at 2,500 miles and better at most ranges of interest in the theater.⁵⁰ The SS-20, because it is mobile and thus hideable, is a survivable system and therefore a potential withhold system providing a selective targeting capability at a later time.⁵¹

Mirror Images

So far it has been shown that the Soviets have as part of their theater doctrine, a concept of selective targeting and damage limitation; a concept also found in Western military literature. It would be a serious error to assume, however, that the Soviets agree to other concepts commonly found in Western literature. Students of Soviet military thought have often accused Western analysts of "mirror imaging" when analyzing Soviet military writings and actions. Mirror imaging is a mental process of an analyst that ascribes to the Soviets the same mental set, values, and strategic and theater war concepts which are popular in the West. Such terms as "nuclear threshold" and "graduated response" are frequently used in a manner indicating that they are concepts that everybody, namely the Soviets, agree upon. Mirror imaging in military analysis is dangerous, in that beginning with Western concepts as a base and then proceeding to determine WP intentions will lead to wrong conclusions. In 1975 former Secretary of Defense Schlesinger commented:

The Soviets apparently see escalation of war in Europe to nuclear conflict as likely...WP forces are postured primarily for the type of theater-wide nuclear strikes pictured in their doctrine and exercises.⁵²

Arbitrary rules of engagement such as limits on weapon yield, depth at which targets in the theater might be engaged, delivery means etc. except for purely tactical reasons, do not exist in Soviet military thinking. The Director of the Institute of the United States and Canada in the Soviet Union, Georgii Arbatov, has stated:

By itself, the idea of introducing rules of engagement and artificial restrictions "by agreement" is illusory and untenable. It is difficult to visualize that a nuclear war, if it is unleashed, could be kept within the framework of "rules" and would not develop into an all out war.⁵³

Although ten years old and perhaps no longer completely in agreement with current Soviet doctrine, the following statements from Voyennaya Mysl' are indicative of the Soviet thought process.

A nuclear war which has begun cannot be localized by anybody. It will envelop without fail the entire world, and capitalism as a socio-economic structure will perish once and for all in its fire.⁵⁴

In a nuclear war, if one breaks out, the combatants will use from the beginning all the available forces and means

at their disposal, above all strategic nuclear means.⁵⁵

In summary, the Soviets have perfected a targeting and damage limiting strategy for both military and socio-economic reasons. As Douglass notes: "In general, Soviet writers have concluded that the population of a state whose economic infrastructure has not been heavily damaged might be controllable with relatively fewer occupation troops."⁵⁶ The thought of West Europe disappearing under a nuclear cloud is purely a Western invention. There would be practically no gain in large scale employment of nuclear weapons against NATO and it would certainly create several problems in military operations and post-war recovery efforts. However, the WP has much to gain from a preemptive nuclear attack targeted against critical command and control centers, nuclear weapons storage sites, and other military targets.

Any decision made by the Soviet political leadership to go to war would weigh on their conscience far heavier than the means selected to wage it. To choose to go to war is to plan for victory. To assume that the Soviets would follow NATO in withholding the most powerful weapon in its inventory or limit its use for other than tactical reasons, is to mortgage Western security to the enemy. For the Soviets to accept or abide by some product of Western fantasy such as a "nuclear threshold" or "graduated response", would be to relinquish a major strength and submit their attacking troops and the entire nation to the whims of Western nuclear decision making. The Soviets certainly have no reason to believe that withholding nuclear weapons on their part would be matched by the West.

CONCLUSIONS PART II

Part II has sought to review several common themes found in contemporary Soviet military writings in an attempt to answer, from the Soviet perspective, questions concerning the likelihood of a short-warning nuclear attack should the Soviet Union decide to go to war. One of the most important themes is the emphasis placed on surprise. The Soviets feel it is essential to quickly gain the initiative in offensive operations. By maintaining the initiative, the Soviets plan to deny NATO the opportunity to organize a forward defense. The WP is prepared to gain surprise in at least two ways. First, through preemptive strikes, nuclear and/or conventional, the WP objective is to radically reduce NATO's capability for timely response. NATO nuclear storage sites and command and control centers are the priority targets. Additionally, by destroying and disorganizing NATO combat units, the force ratios can be altered in favor of the WP. Secondly, the WP will mobilize only those forces absolutely necessary for the initial attack in order to reduce NATO warning time. GSFG forces are capable of attacking with only a few

hours notice and Naval and Air forces require no more than 48 hours to prepare for an offensive.

WP theater doctrine indicates a short war scenario. The Soviets recognize that, despite recent improvements in WP logistic capabilities, a long conventional war favors NATO. The continued political and military reliability of their East European allies would certainly be questionable if a war in Europe were to drag on. The short war goal can best be obtained by the employment of nuclear weapons.

Although it can be argued that the Soviets would not preempt with nuclear weapons and would prefer to win a European theater war conventionally, it can be argued at least as strongly that, once committed to war, the Soviets will do everything possible to insure their chances of success. Even if the WP succeeded in completely surprising NATO, its chances for eventual victory are still less than they would be if nuclear weapons were used in the opening volley. If the WP offensive were to weaken, nuclear weapons are the best method for regaining the momentum. Indications are that the Soviets do not plan on saturating West Europe with nuclear weapons, rather they adhere to a selective targeting and damage limiting doctrine for military and political reasons. The decision to use nuclear weapons would be minor in comparison with the decision to go to war.

GENERAL ANALYSIS

The following is an analysis of the findings presented in this paper in order to answer the two central questions posed at the beginning. First, How viable is the short-warning attack scenario?

1. The WP will take measures to keep NATO's warning time to an absolute minimum - no more than 48 hours. As warning time increases NATO will be able to take increasing military and political measures to thwart an attack. The WP objective is to engage NATO forces before they have time to occupy and prepare their forward defensive positions.

2. The WP will attempt to achieve surprise by attacking with forces already in place and mobilize additional units only at some point where they feel that NATO detection will be of minor consequence - probably from 0 to 48 hours before the attack commences. (This is not to advocate the "bolt from the blue" scenario in which the WP attacks without some deterioration of international events. On the other hand, it is only an assumption that they would not.)

3. A WP attack will begin with preemptive attacks against key NATO facilities such as: command and control centers, airfields, major unit locations, and nuclear weapons storage sites. For the WP not to launch a preemptive attack, they would need significant

superiority over NATO and be confident that they could maintain superiority throughout the war. Although statistics show superiority in several areas in favor of the WP, there are some areas where NATO enjoys superiority. At best it could be argued that parity exists or that the WP is not overwhelmingly superior. Such a balance begs for preemption should a war start.

4. To assume that the WP would provide NATO considerable warning time beyond 48 hours is to assume that the WP is highly confident that it could still generate the necessary force ratios, meet a prepared NATO defense and defeat it, and have more than sufficient forces remaining to continue the offensive against approaching NATO reserves. From the Soviet viewpoint the risk is too high to go to war with such assumptions.

The answer to the first question from the Soviet viewpoint is simple: the short-warning attack is the most viable, most likely, and most profitable scenario that would ensure victory.

Second, Will nuclear weapons be employed from the start?

1. Soviet doctrine is one of complete integration of nuclear and conventional strategies; the concepts of nuclear threshold and graduated response do not have Soviet counterparts. Nuclear weapons are designed to provide a war-fighting and war-winning capability; any value as a deterrent is a secondary benefit.

2. Conventional improvements, rather than indicating a preference for a purely conventional war, reflect a recognition that conventional forces will still have to fight major engagements against NATO forces. A selective targeting and damage limiting doctrine is designed to assist the movement of conventional forces to their objectives.

3. In view of US declaratory doctrine that NATO would be the first to employ nuclear weapons to avoid defeat, for the WP not to employ nuclear weapons from the start it would have to accept one or some combination of the following propositions:

a. The WP can absorb the first nuclear strike and still have high confidence of winning.

b. The WP can win conventionally regardless of NATO counter-measures.

c. The WP will accept a stalemate if a NATO conventional defense holds.

d. The WP can accurately predict NATO preparations to employ nuclear weapons, detect the dispersed launchers, target their locations, and launch a preemptive strike which will destroy NATO's nuclear capability to such a degree that the planned NATO strike would be too weak to alter the war's outcome.

e. The WP can effectively destroy enough of NATO's nuclear capability with conventional means so that any remaining nuclear weapons are not sufficient to alter the war's outcome.

f. The NATO declaratory doctrine of first-use politically can not be implemented and NATO would accept defeat rather than employ nuclear weapons.

None of these propositions bears any resemblance to reality as the Soviets see it, with the possible exception of "e". But this would appear to be too high a risk, considering the WP objective of winning quickly and decisively.

The answer to the second question is not as clear cut as the answer to the first. The findings indicate that at the very least Western analysts have not given enough attention to the possibility of a WP preemptive nuclear attack in the theater. The findings tend to indicate, in the worst case, that the Soviets see a nuclear preemptive attack in a theater war as the best insurance for winning.

Soviet General Lomov has summarized the underlying Soviet attitude toward war since the time of Lenin:

Soviet military strategy views and examines a war under modern conditions, if the imperialists start it, as the decisive clash between two opposing world socio-economic systems, in which both warring sides will pursue decisive political goals.⁵⁷

The Soviets are not likely to leave such a decisive war open to chance by providing NATO with sufficient warning nor by withholding their most powerful and decisive means of combat. If the next war comes, the Soviets are planning to fight and win the first battle and the last battle. The short-warning nuclear attack option gives the WP the highest probability of making both battles one and the same.

FOOTNOTES PART I

1. For excellent estimates of the military balance see the following. The Military Balance 1978-1979 (and previous editions), (London: The International Institute for Strategic Studies, 1978), Jeffery Record, Sizing Up the Soviet Army, (The Brookings Institution, 1975); John Collins, American and Soviet Military Trends Since the Cuban Missile Crisis, (Washington: Center for Strategic and International Studies, Georgetown University, 1978).
2. The Military Balance 1978-1979, (London: International Institute for Strategic Studies, 1978), p.108.
3. Ibid., p. 109.
4. Ibid., p. 111.
5. Ibid., p. 118.
6. Ibid., p. 111.
7. Sherwood S. Cordier, Calculus of Power: The Current Soviet-American Conventional Military Balance in Central Europe, 2d ed. (Washington: University Press of America, 1977), pp. 57-58.
8. The Military Balance, pp. 115-118.
9. Personal conversation with Captain J.F. Moore, Royal Navy, editor of Jane's Fighting Ships, at the annual Soviet Affairs Symposium, US Army Russian Institute, December 1978.
10. Stewart W.B. Menaul, "The Military Balance and its Implications: A European View", Strategic Review, Summer 1977, pp. 51-52.
11. For example, see: Assessing the NATO/Warsaw Pact Military Balance, (Washington: Congressional Budget Office, US Congress, December 1977). This budget issue paper for FY 1979 references several studies of various measures of the NATO/WP balance.
12. General George S. Brown, United States Military Posture for FY 1979. (Washington US Department of Defense, 20 January 1978), p. 15.
13. Ibid., p. 89.
14. "New Assessment Put on Soviet Threat", Aviation Week and Space Technology, 28 March 1977, p. 11.
15. NATO and the New Soviet Threat, (Washington: Senate Committee on Armed Services, US Congress, 1977), p. 1.

16. Brown, p. 1.
17. Secretary of Defense Donald H. Rumsfeld, Annual Defense Department Report, FY 1978, (Washington: US Department of Defense, 17 January 1977), p. 18.
18. Data compiled from: David Hazel, "The Sudden Attack Debate: Arguments and Alternatives", RUSI, (December 1978), pp. 37-43, and John Erickson, "Soviet Theater Warfare Capability", The Future of Soviet Military Power, ed. Lawrence L. Whetten, (New York: Crane, Russak & Company, Inc., 1976), pp. 117-156.
19. Quoted in: Jacquelyn K. Daves and Robert L. Pfaltzgraff Jr., Soviet Theater Strategy: Implications for NATO. (Cambridge, Mass.: United States Strategic Institute Report 78-1, 1978), p. 54.
20. "U.S. Will Need New Arms", Stars and Stripes, 15 December 1978, p. 27.
21. Rumsfeld, p. 95.
22. NATO and the New Soviet Threat, P. 4.
23. John Collins, American and Soviet Military Trends Since the Cuban Missile Crisis, (Washington: Georgetown University, 1978), p. 343.
24. Benjamin Schemmer, "Haig Now Says NATO Can Expect 8-14 Days Warning Time, Not 48 Hours", Armed Forces Journal, October 1977, p. 16.
25. Collins, p. 343.
26. Colin Gray, in a lecture delivered at the Annual Soviet Affairs Symposium sponsored by the US Army Russian Institute, Garmisch, Germany, December 1978.

FOOTNOTES PART II

1. A.A. Grechko, Vooruzhenmye Sily Sovetskogo Gosudarstva (Moscow: 1975), pp. 345-346.

2. Dictionary of Basic Military Terms (Moscow: 1965), translated from Russian under the auspices of the US Air Force in the Military Thought Series, p. 35.

3. Peter Vigor, in a speech delivered at the Annual Soviet Affairs Symposium sponsored by the US Army Russian Institute, Garmisch, Germany, December 1978.

4. N.A. Lomov, ed., The Revolution in Military Affairs (Moscow: 1973), translated from Russian under the auspices of the US Air Force in the Military Thought Series, p. 152.

5. V.Ye. Savkin, The Basic Principles of Operational Art and Tactics (Moscow: 1972), translated from Russian under the auspices of the US Air Force in the Military Thought Series, p. 230.

6. A.A. Sidorenko, The Offensive (Moscow: 1970), translated from Russian under the auspices of the US Air Force in the Military Thought Series, p. 42.

7. K. Moskalenko, Marshal of the Soviet Union, "Constant Combat Readiness is a Strategic Category", translated from Voyennaya Mysl' no. 1, January 1969, p. 14.

8. Sidorenko, p. 112.

9. Ibid., p. 115.

10. Ibid., p. 43.

11. Henry Young, Nuclear Deterrence: The Evolving Role of Naval Forces, Center for Advanced Research, Naval War College, January 1978.

12. Quoted from a New York Times editorial, 8 December 1977, by Drew Middleton in Jacquelyn K. Daves and Robert L. Pfaltzgraff Jr., Soviet Theater Strategy: Implications For NATO (Cambridge, Mass.: United States Strategic Institute Report 78-1, 1978), p. 34.

13. V.C. Sokolovskiy, Soviet Military Strategy, edited by Harriet Fast Scott, (New York: Crane Russak, 1975), p. 291.

14. N. Vasendin, Major General and N. Kuznetsov, Colonel, "Modern Warfare and Surprise Attack", Voyennaya Mysl', no. 7,

July 1969.

15. Lawrence L. Whetten, University of Southern California, letter to the author, 10 January 1979.

16. Sokolovskiy, p. 308.

17. For an excellent study of the military balance including force ratios and breakthrough ratios see: Robert Lucas Fischer, Defending the Central Front: the Balance of Forces (London: The International Institute for Strategic Studies, Adelphi Paper no. 127, 1976).

18. Savkin, p. 89.

19. Sokolovskiy, p. 291.

20. Sidorenko, p. 89.

21. Lomov, p. 145.

22. V.G. Reznichenko, Tactics (Moscow: 1966), translated under the auspices of the US Air Force by Foreign Technology Division, 1967, p. 252.

23. John P. Rose, Major, US Army, U.S. Army Doctrinal Developments: The Nuclear Battlefield, 1945-1977 Dissertation (University of Southern California, School of International Relations, Defense and Strategic Studies Program, 1977), Repeated references.

24. Collins, p. 174.

25. Peter Vigor, Head, Soviet Studies Center, Ministry of Defense, Great Britain, letter to author, December 1978.

26. Christopher Donnelly, Assistant Head, Soviet Studies Center, Ministry of Defense, Great Britain, in a lecture delivered at the Annual Soviet Affairs Symposium, Garmisch, Germany, December 1978.

27. Secretary of Defense James R. Schlesinger, The Theater Nuclear Force Posture in Europe, A Report to Congress in Compliance with Public Law 93-365, (Washington: Department of Defense, 1 April, 1975), p. 11.

28. Savkin, p. 151.

29. I.G. Zav'yalov, "The New Weapon and Military Art", Krasnaya Zvezda, 30 October 1970, pp. 2-3, translated under the auspices of the US Air Force in Selected Soviet Military Writings 1970-1975, pp. 206-213.

30. Reznichenko, p. 51.

31. Sidorenko, p. 62.

32. Ibid., p. 88.

33. Schlesinger, p. 10.

34. In The Offensive, p. 62, Sidorenko states:

In spite of the fact that nuclear weapons will become the chief means of defeating the enemy, their role and capabilities cannot be made absolute, especially in the attainment of goals of combat actions by [units]. In a number of cases [units] will have to perform various combat actions, including the attack, without use of nuclear weapons, using conventional, organic "classic" means of armament-artillery, tanks, small arms, etc.

Grechko, in Vooruzhennyye Sily Sovetskogo Gosudarstva, p. 159, states:

...for all their formidable power and vital role nuclear-tipped strategic ICBMs cannot reach every objective of war. That is why efforts are continuing to develop new and to improve existing types of conventional arms.

35. Friedrich Wiener and William J. Lewis, The Warsaw Pact Armies (Vienna: Carl Ueberreuter Publishers, 1977), p. 77.

36. A.A. Grechko, quoted in William R. Van Cleave and S.T. Cohen, Tactical Nuclear Weapons, (New York: Crane Russak, 1978), p. 65.

37. Sidorenko, p. 149.

38. Soviet airborne units are the elite of the ground forces. All units bear the honorary title of "Guards" and all personnel are volunteers - about 7,000 personnel in a division. Airborne units are of two types: those organized into regular divisional units and those organized for long range reconnaissance and partisan operations. (Source: Wiener and Lewis, The Warsaw Pact Armies, p. 76.)

John Erickson has found that one company in each motorized rifle division is trained as a "commando company". These units, "vysotniki", are HALO (high altitude low opening) parachutist qualified and are utilized in sabotage and reconnaissance missions. In addition there are two Soviet combat helicopter regiments in GSFG deployed to lift motorized rifle units, probably of battalion size, to seize key terrain ahead of attacking WP units. (Source: John Erickson, "Soviet Military Capabilities in

Europe,' RUSI, (March 1975), p. 68.)

Of special interest to NATO are the "reydoviki" units which are of brigade size, three or four battalions each for a total strength of about 2,500, and which contain an organic air transport unit. There may be up to six of these brigades in the Soviet Union and several similar units have been tentatively identified in most WP countries. It has been confirmed that the special air-borne units of the East German, Polish and Czechoslovak armies conduct training wearing the uniforms of NATO armies including the US. Language training and training concerning the army of the target country is also evident and it is assumed that Soviet units undergo similar training. Their mission is reconnaissance and sabotage behind enemy lines. (Source: Wiener and Lewis, The Warsaw Pact Armies, p. 79.)

39. Whetten, Op. Cit.
40. Sokolovskiy, p. 291.
41. Sidorenko, p. 132.
42. Lomov, p. 144.
43. Reznichenko, p. 253.
44. Young, p. vi.
45. Joseph Douglass Jr., "Soviet Nuclear Strategy in Europe: A Selective Targeting Doctrine?", Strategic Review, (Fall 1977), pp. 19-32.
46. Sidorenko, p. 113.
47. Ibid., p. 88.
48. Quoted in Van Cleave and Cohen, p. 46.
49. V. Zemskov, "Characteristic Features of Modern Wars and Possible Methods of Conducting Them", translated from Voyennaya Mysl, no. 7, July 1969.
50. Douglass, "Soviet Nuclear Strategy in Europe: A Selective Targeting Doctrine?", p. 21.
51. Ibid., p. 25.
52. Schlesinger, p. 10.
53. G. Arbatov, quoted in Leon Goure, Foy Kohler and Mose Harvey, The Role of Nuclear Forces in Current Soviet Strategy (Coral Gables: Center for Advanced International Studies, University of Miami,

1974), p. 129.

54. Zemskov, p. 23.

55. Ibid., p. 19.

56. Douglass, "Soviet Nuclear Strategy in Europe: A Selective Targeting Doctrine?", p. 25.

57. Lomov, p. 137.

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